

REMARKS

Claims 1-37 are pending in the present application,. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Applicant notes with appreciation the indication that claims 1-34, 36 and 37 are allowed. Applicant is amending claims 13 and 17 to be placed in independent form and include all the recitations of claim 35 accordingly, from which they depend. Applicant submits that these claims are allowable as amended.

Claim 35 was rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,570,438 to Fontana et al. This rejection is respectfully traversed for the following reasons.

Claim 35 recites a device for handling an optical pulse signal in a fiber communication link. The device includes one or more second harmonic generating (SHG) elements, each being capable of performing a cascaded second harmonic generation (SHG) with respect to a particular fundamental harmonic (FH). The device is adapted to provide a selectively adjustable inner optical path for the optical pulse signal propagating via the one or more SHG elements at the fundamental harmonic (FH), for controlling phase shift accumulation in the optical pulse signal outgoing the device at the FH. This is not taught, disclosed or made obvious by the prior art of record.

Fontana speaks at column 1, lines 8-16 about producing very short optical pulses by a laser. It is mentioned that such optical pulses can be suitable for the digital high speed telecommunication field, for accomplishment of optical

instruments, tests on semiconductor components, remote measurements, such as in topography and in atmospheric radar field.

As has been mentioned in Applicants' previous response, the purpose of the invention is not producing ultra short pulses (which is the field of the laser technology). One of the main objects of the invention is ensuring stable transmission of optical pulses via a long fiber communication link by controlling non-linear phase shift accumulated in the optical pulse signal during its propagation along the link.

Fontana does not describe or suggest handling optical pulses in any telecommunication line, and definitely not from the point of non-linear phase shift/shaping.

Further, (Fig. 2 and in the corresponding cited description in col. 9, lines 4-12), Fontana describes measuring duration of a pulse by SHG phenomenon in a suitable crystal. The description briefly mentions a general scheme of an autocorrelator based on using the second harmonic (SH) generated by an SHG crystal. The autocorrelator described by Fontana divides an optical pulse signal into two portions and adjusts the length of optical path of travel of one portion in order to control its delay with respect to the other portion, both taken at the second harmonic (SH). The autocorellator utilizes the second harmonic and throws away the fundamental frequency (FH) component of the signal.

The device proposed in the frame of the invention is capable of performing a totally different operation: adjusting the inner optical path of one optical pulse signal passing via SHG element(s) at the fundamental harmonic (FH), thereby controlling the phase-shift accumulation in the FH (to achieve treatment of non-linearity and the pulse shaping). Applicant has amended claim 35 to clearly reflect

Appln. No. 09/927,349
Amdt. dated May 11, 2004
Reply to Office Action of February 12, 2004

the differences between the claimed invention and the Fontana patent. Applicant respectfully submits that claim 35 is patentable over Fontana.

In view of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By


Ronni S. Jillions
Registration No. 31,979

RSJ:ft

Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\IE\ecil\Malomed1A\PTO\10May04Amendment.doc